REMARKS

Withdrawal of Notice of Appeal Submitted April 23, 2004

The Examiner issued a final office action on January 23, 2004. The undersigned attorney for Applicant submitted a Request for Reconsideration on 6 February 2004. On April 23, 2004 (the three-month date after the January 23, 2004 final office action) the undersigned Attorney for Applicants filed, via facsimile, a Notice of Appeal, since no communication had been received in response to the 6 February 2004 submission. The June 28, 2004 office action is in response to the 6 February 2004 Request for Reconsideration. It is requested that the Notice of Appeal submitted April 23, 2004 be withdrawn, in view of the June 28, 2004 office action. Applicants reserve the right to apply any Fee paid for the April 23, 2004 Notice of Appeal, towards a future Notice of Appeal, should one become necessary.

Summary of Present Response

In the office action mailed June 28, 2004, the Examiner withdrew the finality of the January 23, 2004 office action, clarified the status of claims not mentioned in the January 23, 2004 office action, and revised the explanation of the final rejection. With the present amendment, claims 6 and 16 have been substantively amended; claims 8 and 9 have been written in independent form and claim 15 has been amended to correct a typographical error.

For reasons stated below, it is submitted that the claims are patentable over the cited combination of references.

Rejection under 35 USC 103(a)

In the current office action[1], claims 1, 4, 6-9, 11-14 and 16 were rejected under 35 USC 103(a) as being unpatentable over (1) Lau et al.[2] (hereinafter "Lau") in view of (2) O'Shaughnessy (US 5,978,778).

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1 This is this 5th office action in this application.

2 "Trading of Nasdaq Stocks On the Chicago Exchange", The Journal of Financial Research, Vol. XIX, No. 4, Pages 579-584, Winter 1996.

Claims 5, 15 and 17-24 were rejected under 35 USC 103(a) as being unpatentable over (1) Lau et al. as modified by (2) O'Shaughnessy and in further view of (3) Ferstenberg (U.S. 5,873,071).

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over (1) Lau in view of "O'Shaughnessy and (3) In re Harza, 124 USPQ 378, 380; 274 F.2d 669 (CCPA).

For reasons discussed below, it is respectfully submitted that the Examiner has misinterpreted the Lau reference, and so the rejection of record is traversed and should be withdrawn.

The Lau Reference

To understand why applicants believe the Examiner's rejection to be incorrect, it is important to understand the teachings of the Lau Reference.

The Lau Reference describes a study that compares a first group of 60 stocks that are traded on both on the NASDAQ and the CSE ("first group"), with a second group of 57 stocks that are traded only on the NASDAQ ("second group"). The two groups in the study were disjoint, and had no members in common.

The purpose of the study was to examine the competitive effect of trading stocks on two markets (i.e., the first group) *vis a vis* trading stocks only on one market (i.e., the second group). The hypotheses were that (1) the spreads would be lower for the first group (since they were traded on two markets); (2) the number of stocks with spreads below $0.125 would be lower for the second group (since they were traded only on one market; and (3) the volatility of the first group would be greater (again, due to the competition of being traded on two markets).

At the time of the study, the NASDAQ had 1580 stocks in all. Of these, 1480 stocks were traded solely on the NASDAQ, and 100 stocks were traded on both the NASDAQ and the CSE. However, instead of comparing all 1480 stocks traded only on the NASDAQ with all 100 stocks traded on both the NASDAQ and the CSE, the authors selected subsets of these. Using the selection methodology explained in the reference, the authors ended up comparing 60 stocks traded on both the NASDAQ and CSE stocks ("first group) with 57 stocks traded only the NASDAQ ("second group"). This is explained in the last two paragraphs on page 580 of the Lau article, which read:

> "The initial sample comprises 1,580 stocks that trade on the NASDAQ. Of these, 100 also trade on the CSE.....
>
> The linear programming model is used to form two portfolios, one a subset[3] of the 100 firms that trade on both the CSE and NASDAQ and the other a subset[4] of the 1480[5] firms that trade only on the NASDAQ." (emphasis added)

Indeed, the members of the two portfolios were selected so that two portfolios would have seven statistical attributes in common (See Table 1 on p. 582 of the Lau Reference). Having these attributes in common helps eliminate causes for variation in the parameters being studied (i.e., the parameters of interest for the hypotheses).

The Examiner's Rejection of Independent Claim 1

In the Office Action, in formulating the rejection of the claims, the Examiner interpreted the Lau reference as follows:

> Lau discloses a method for facilitating an exchange in ownership and a first financial instrument[6] and/or plurality of instruments representing ownership interest in a first portfolio (see Lau Abstract, NASDAQ/CSE stocks), the first portfolio comprising units of an integer number of M (Where M is equivalent to NASDAQ/CSE stocks) different securities selected from NASDAQ (Where NASDAQ is an equivalent to the number of securities that reside in N, see Lau Abstract, *Data and Methodology*), NASDAQ comprising units of a integer number N different securities, N>M, with the M different securities being a subset of N different securities (See Lau Abstract and Introduction),
>
> wherein the first financial instrument *(having securities M within the NASDAQ/CSE portfolio),* and a second financial instrument

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3 As seen in Table 1 on p. 582 of the article, this subset ultimately contains only 60 of the 100 firms that trade on both the NASDAQ and the CSE. Using the Examiner's interpretation of Lau as applied to the pending claims, N = 60.

4 As seen in Table 1 on p. 582 of the article, this subset contains only 57 of the 1480 firms that trade only on the NASDAQ. Using the Examiner's interpretation of Lau as applied to the pending claims, M = 57.

5 1480 (total in NASDAQ only) = 1580 (total in NASDAQ) – 100 (those in both NASDAQ and CSE)

6 Lau's article is an academic study comparing two groups of stocks. Nowhere does Lau suggest a "financial instrument representing an ownership interest" in either group.

representing an ownership interest in the[7] (having securities within the NASDAQ), are traded on a securities market (see Lau),

wherein all of the M different securities in the first portfolio are traded on a first securities market (CSE) and none of the other N-M (All of the NASDAQ Securities minus NASDAQ/CSE securities) different securities are traded on the first securities market (see Lau Abstract and Introduction). Lau compares M(NASDAQ/CSE) securities with N-M securities. We know that NASDAQ consists of N and M[8] securities since M is a subset of N. Therefore, it would have been obvious for an artisan at the time of the invention to provide comparisons of M securities to N securities via a representative portfolio of N securities because an artisan at the time of the invention would have recognized such a comparison as an obvious extension to the teachings of Lau to evaluate spread differences and trading performance. Thus such a modification would have been an obvious expedient well within the ordinary skill in the art.

It is first submitted that the Examiner is mistaken in asserting that "Lau discloses a method for facilitating an exchange in ownership and a first financial instrument[9] and/or plurality of instruments representing ownership interest in a first portfolio."[10] (It is additionally noted that Lau does not disclose a 'second financial instrument' representing an ownership interest in the second portfolio, either). Lau is simply a study of two *groups* of stocks having seven similar statistic parameters (i.e., those in Table 1 of Lau). Nowhere does the Lau reference mention creating a financial instrument corresponding to an ownership interest in *any* portfolio. As is known to those skilled in the art, creating a financial instrument representing an ownership interest in a portfolio of stocks typically requires one to obtain the underlying shares, make arrangements with one or more of the exchanges to trade the financial instrument, obtain SEC approval, market the securities, etc. Thus, the Lau reference is an academic study of two groups

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[7] It is believed that the Examiner omitted the words "second portfolio", so that the sentence should have read ". . .an ownership interest in the second portfolio (having securities within the NASDAQ). . . "

[8] It is completely unclear what the Examiner means by 'We know that NASDAQ consists of N and M securities'. It is assumed for present purposes that the Examiner meant that NASDAQ comprises N securities, the M being included in the N.

[9] Lau's article is an academic study comparing two groups of stocks. Nowhere does Lau suggest a "financial instrument representing an ownership interest" in either group.

[10] It is additionally noted that Lau does not disclose a 'second financial instrument' representing an ownership interest in the second portfolio, either.

of stocks, and so requires none of these activities – there simply is no motivation to go through the various steps of creating a financial instrument representing an ownership interest in either group of stocks.

It is next submitted that the Examiner is incorrect in asserting that Lau satisfies the claimed relationship between "N" and "M" as to the composition of securities in the two portfolios. It is initially noted that the Examiner fails to explicitly state whether 'M' = 100 – i.e., whether M is ALL the stocks that trade on both the NASDAQ and the CSE (i.e., the 'first group') OR whether 'M' = 60 – i.e., whether M is only those stocks that (a) traded on both the NASDAQ and the CSE and (b) were selected for the study. Either way, the Examiner's analysis is incorrect.

If, on the one hand, the Examiner considers N = 1580 (all stocks on the NASDAQ, of which 1480 are traded only on the NASDAQ) and M = 100 (all stocks on traded on both the NASDAQ and also the CSE), then the Examiner's analysis is wrong because the Lau reference does not use all M = 100 stocks to form the 'NASDAQ/CSE portfolio' (it only uses 60 stocks, as discussed above) – in other words, Lau does not disclose what the Examiner ostensibly purports it to disclose.

If, on the other hand, the Examiner considers N = 1580 (all stocks on the NASDAQ) and M = 60 (all stocks on traded on BOTH the NASDAQ and the CSE AND picked for the study), then the Examiner's analysis is wrong because the limitation in claim 1 that "none of the other N - M different securities are traded on said first securities market" cannot be met. This is because N – M = 1580 – 60 = 1520, of which 1480 are traded only on the NASDAQ *but 40 others are traded on both the NASDAQ and the CSE (the 40 having NOT been picked for the study)*. And since some (i.e., 40) of the N – M (i.e., 1520) *are* traded on the first securities market, this limitation clearly is not met. If the Examiner maintains the rejection, the Examiner is kindly asked to explicitly state whether he considers M to be 100 or 60 and address the appropriate point made above.

The Examiner's argument with respect to the language of claim 1 regarding the "weight of each security in the second portfolio" is as follows:

> Furthermore, Lau discloses calculating the mean of each variable within the respective portfolios and ranking the stocks within the portfolios, but does not disclose 'wherein the weight of each security in the first portfolio is substantially similar to the securities corresponding weight in the second portfolio, divided by the combined weight of the first portfolio within the second portfolio.' O'Shaughnessy discloses a method by which stocks are equally weighted within their respective portfolios (See O'Shaughnessy, at least col. 2, ll. 35-53). Since Lau ranks each of the securities within the respective portfolios and also calculates a mean of them (see Lau, pages 581 and 582), it would have been obvious for an artisan at the time of the invention of Lau to integrate a weighting factor, as disclosed by O'Shaughnessy, into one of the calculations provided by of (sic) Lau because an artisan at the time of the invention would have recognized that providing a distinction (by weight) between the securities as either an art recognized equivalent to the ranking of securities provided by Lau or as constituting an alternative means of providing distinctions between securities that would be well within the ordinary skill in the art.

At the outset, Applicants submit that "calculating the mean of each variable within the respective portfolios and ranking the stocks with the portfolios" has no bearing on *weighting* the stocks. Applicants further submit that (a) it would ruin Lau's "first portfolio" (for Lau's purposes) if one were to "integrate a weighting factor", as suggested by the Examiner, and so there is no motivation to modify Lau's group of stocks that are sold on both the NASDAQ and CSE so as to meet the claim requirement that "the weight of each security in the first portfolio is similar to that security's corresponding weight in the second portfolio, divided by the combined weight of the first portfolio within the second portfolio"; and (b) even if the weighting of Shaughnessy could be employed, one still would not arrive at the invention of pending claim 1.

As to (a), as mentioned above, the purpose of Lau's study is to *compare* certain properties of two groups of stocks to test three hypotheses. Stock membership in the two groups was selected so that the groups have 7 statistical attributes in common (Table 1 on p. 582 of Lau). By having these 7 attributes in common, Lau was able to test his hypotheses without worrying that differences between the two groups in these attributes played a role in the outcome. It would frustrate Lau's careful efforts at forming these two groups so that they have these 7 statistical attributes in common, if one were now to weight the stocks in one of the groups in *any* manner. This is because any such weighting would result in the two groups no longer having similar statistical attributes (and presumably introducing uncertainties in the hypothesis testing).

As to (b), O'Shaughnessy, at col. 2, lines 35-52, discloses "Annual Rebalancing" – "For example, if $1,000,000 is invested in 50 stocks, a $20,000 investment is made in each stock (O'Shaughnessy at col. 2, lines 38-40). In other words, O'Shaughnessy discloses a portfolio in which the stocks are equally weighted. Thus, even if, contrary to all logic (and ruining Lau's carefully formed groups in the process), one were to weight the stocks in the group with stocks traded on both the NASDAQ and the CSE, in the "equally weighted" manner taught by O'Shaughnessy, this still would not result in "the weight of each security in the first portfolio (being) similar to that security's corresponding weight in the second portfolio, divided by the combined weight of the first portfolio within the second portfolio".

In view of all of the foregoing, it is submitted that pending independent claim 1 defines over any combination of Lau and O'Shaughnessy. Should the Examiner continue to maintain the rejection, the Examiner is kindly asked to explicitly address the points above.

Independent claim 15

Independent claim 15 is believed to be patentable for the same reasons as claim 1.

Dependent claim 4

The Examiner rejected this claim as being unpatentable over Lau in view of O'Shaughnessy. As stated above, contrary to the Examiner's assertion, Lau does not teach forming first and second financial instruments, each of which represents an ownership interest in a portfolio in accordance with claim 1. And O'Shaughnessy does not remedy this deficiency in Lau. However, even if either reference can be interpreted to teach such financial instruments, neither Lau nor O'Shaughnessy state that both such financial instruments are traded on the same securities market. It is emphasized here that trading individual stocks on a securities market (e.g., the NASDAQ or the CSE) is not the same as trading a financial instrument representing an ownership interest in a portfolio of different stocks. Again, the Examiner is asked to explain how the Lau and O'Shaughnessy references disclose trading such financial instruments on the same securities market.

Independent Claim 6

Pending independent claim 6 now explicitly recites "wherein the M different securities in the first portfolio are all traded on the National Association of Securities Dealers Automated Quotations System (NASDAQ) and none of the N-M other securities in the second portfolio are traded on the NASDAQ. (emphasis added). Since the N securities in Lau are ALL traded on the NASDAQ, it is clear that the Lau/Shaughnessy combination cannot possibly meet this limitation and so pending claim 6 clearly should be allowed. If the Examiner maintains the rejection of claim 6, the Examiner is kindly asked to explain how this can be, given that ALL of the securities in the Lau reference are traded on the NASDAQ.

Dependent Claim 7

Pending claim 7 effectively recites that the second portfolio comprises stocks in the S&P 500 while the first portfolio comprises only those stocks of the S&P 500 that are in the NASDAQ. In rejecting claim 7 over Lau in view of O'Shaughnessy, the Examiner argued:

> It would have been obvious for an artisan of ordinary skill at the time of the invention to employ various sectors that are within exchanges to take advantage of certain features that reside within those sectors such as low volatility and high volume. Thus to employ the various sectors would be considered an obvious extension to the teachings of Lau to compare spread and trading performance.

It is completely unclear what relevance the Examiner's comments has to the subject matter of claim 7. It is first noted that that Lau makes no mention of the S&P 500 while O'Shaughnessy mentions the S&P 500 only in the context of saying that most mutual funds do not beat the S&P 500. It is further noted that Lau's entire purpose was to compare stocks traded on both the NASDAQ and CSE with stocks traded only on the NASDAQ. Why would one skilled in the art depart from this teaching of Lau to also use "various sectors" of "exchanges", as suggested by the Examiner. What are the "various sectors"? To which "exchanges" does the Examiner refer? What "low volatility" or "high volume" in those "various sectors" is the Examiner referring to? Is the Examiner taking official notice of something? If so, what might that be? It is submitted that the Examiner has utterly failed to make a prima facie case for rejecting claim 7. Indeed, the Examiner's explanation of this rejection is so vague and ambiguous as to foreclose Applicants from intelligibly responding to the Examiner's rejection. The Examiner is kindly asked to

address the questions posed above, and present a prima facie case of unpatentability of claim 7 over the Lau and O'Shaughnessy references, if this rejection is to be maintained.

Claims 8 and 9

Claims 8 and 9 have both been amended to be written in independent form to include the limitations of original claim 1, and are believed to be patentable over the prior art of record.

Independent Claim 16

Pending independent claim 16 now recites, inter alia, "the M different stocks are included in an index based on market capitalization values of an integer number N different stocks, N > M, with the M different stocks being a subset of the N different stocks and at least some of the N different stocks not being traded on the NASDAQ". (emphasis added). The underlined language clearly is not met by Lau, which discloses that all 1580 stocks are traded on the NASDAQ. Since Lau teaches away from this feature, it is submitted that claim 16 clearly defines over any combination of Lau and O'Shaughnessy. If the Examiner maintains the rejection of independent claim 16, the Examiner is kindly asked to explain how this can be, given that ALL of the securities in the Lau reference are traded on the NASDAQ.

Dependent claims 17-22

Claim 16 is the base claim for claims 17-22. Dependent claims 17 & 18 specify the index recited in claim 16. Lau makes no mention of either the S&P 100 or S&P 500 indices. O'Shaughnessy mentions the S&P 500 only in the context of saying that most mutual funds do not beat the S&P 500. Ferstenberg mentions the S&P 500 twice, simply referring to it as a "benchmark portfolio". It is therefore submitted that the cited prior are does not disclose that either the S&P 100 or the S&P 500 is a suitable index for an invention in accordance with claim 16, and so claims 17 & 18 are believed to be patentable.

Dependent claims 19 and 20 mention that some of the N securities(claim 19) or all N-M of the securities (claim 20) are traded on the NYSE. It is submitted that no combination of references renders either of these claims obvious.

Dependent claims 21 & 22 further define the invention of claim 20 by specifying the index recited in claim 16. For reasons set forth above with respect to claims 17 & 18, it is believed that claims 21 & 22 define over the prior art.

Independent Claim 10 and Dependent claim 11[11]

It is submitted that independent claim 10 is patentable because no combination of Lau, O'Shaughnessy and In re Harza discloses: either (1) the weight of each security in any one C_j is similar to that security's corresponding weight in the second portfolio, divided by the combined weight of C_j within the second portfolio (for reasons stated above with respect to claim 1); or (2) all of said M different securities in at least one of the J portfolios are traded on a first securities market, and none of the other N- M different securities are traded on said first securities market (also for reasons stated above with respect to claim 1).

Dependent Claim 12

Dependent claim 12 recites that the set of portfolios forms a mathematical partition of the N different securities. As is known to those skilled in the art, a partition of the N different securities means that all N securities are distributed among the set of J portfolios with no single security appearing in two or more of the J portfolios. Nothing in Lau or O'Shaughnessy (or even, for the matter, the In re Harza holding, suggests a partition.

Dependent Claim 13

Dependent claim 13 recites that there is some overlap of securities within the set of J portfolios. Nothing in Lau or O'Shaughnessy (or even, for the matter, the In re Harza holding, suggests this. Indeed, Lau compares two disjoint groups of stocks – those traded on both the NASDAQ and the CSE, and those traded only on the NASDAQ. Furthermore, there is no reason in Lau to form additional groups.

[11] It is curious that the Examiner's rejection of claim 10 relies on In re Harza while the rejection of claims 11-14, which depend on claim 10 as their base claim, do not.

Dependent Claim 14

Dependent claim 14, which depends on dependent claim 13, recites that in addition to there being some overlap of securities within the set of J portfolios, all N securities appear in at least one of the J portfolios. Nothing in Lau or O'Shaughnessy (or even, for the matter, the In re Harza holding suggests this. Indeed, Lau deliberately uses subsets of all stocks for his study, and thus teaches away from creating portfolios that use all N securities.

Independent claims 23 & 24

The Examiner's rejection of these claims is traversed. Lau makes no mention of either the S&P 100 or S&P 500. O'Shaughnessy mentions the S&P 500 only in the context of saying that most mutual funds do not beat the S&P 500. Ferstenberg mentions the S&P 500 twice, simply referring to it as a "benchmark portfolio". Nothing in Lau, O'Shaughnessy or Ferstenberg teaches or suggests a portfolio comprising the NASDAQ-only component of the S&P 500 (claim 23) or the NASDAQ-only component of the S&P 500 (claim 24). In view of the fact that none of the cited references mentions forming a portfolio with the NASDAQ-only portion of the S&P 500 (or the S&P 100), let alone a financial instrument representing an ownership interest in such a portfolio or the claimed weighting of stocks in such a portfolio, it is submitted that claims 23 and 24 define over the prior art of record. The Examiner is again asked to make a prima facie showing of unpatentability, if the rejection is to be maintained.

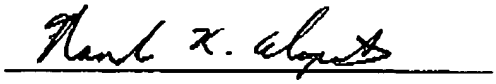
With respect to all claims not specifically mentioned, it is submitted that these are patentable not only by virtue of their dependence on their respective base claims and any intervening claims, but also for the totality of features recited therein.

Reconsideration of the application is requested. All claims are believed to be in allowable form and define over the prior art of record. An early notice of allowance is requested so that the application may proceed to issue.

A separate fee transmittal sheet is enclosed.

Respectfully Submitted,

Date: September 20, 2004



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